WHAT IS CLAIMED IS:

1. A piezoelectric device comprising a first element of porous crystalline material, a second element being attached to, or integrally formed with, said first element, and at least one electrode being in electrical contact with said first element, such that subjecting said first element to an electric potential via said at least one electrode results in a strain induced by said first element on said second element.

2. The piezoelectric device of claim 1, wherein said porous crystalline material is selected from the group consisting of porous silicon, or other material with conductive channels and isolating channels such as spaces.

3. The piezoelectric device of claim 1, wherein said second element is made of crystal material.

4. A piezooptic device comprising a first element of porous crystalline material, a second element being attached to, or integrally

formed with, said first element and a light source, such that subjecting said first element to light originating from said light source results in a strain induced by said first element on said second element.

5. The piezoelectric device of claim 1, wherein said porous crystalline material is selected from the group consisting of porous silicon, or other material with conductive channels and isolating channels such as spaces.

6. The piezoelectric device of claim 1, wherein said second element is made of crystal material.

7. An adaptive reflector comprising a first layer of porous crystalline material being attached to, or integrally formed with, a second layer having a reflective surface.

8. The adaptive reflector of claim 7, wherein said reflective surface is formed as a reflective coat over said first layer.

9. The adaptive reflector of claim 7, wherein said reflective surface is designed to reflect light waves.

10. The adaptive reflector of claim 7, wherein said reflective surface is designed to reflect micro waves.

11. The adaptive reflector of claim 7, wherein said reflective surface is designed to reflect radio waves.

12. The adaptive reflector of claim 7, further comprising at least one electrode through which an electric potential is applicable to said first layer.

13. The adaptive reflector of claim 7, further comprising at least one light source with which light is applicable to said first layer.

14. A method of inducing strain in a first element, the method comprising the steps of attaching to the first element, or integrally forming

with the first element, a second element of porous crystalline material and subjecting said second element to electric potential.

15. The method claim 14, wherein said porous crystalline material is selected porous silicon.

16. The method of claim 14, wherein said second element is made of crystal material.

17. A method of producing a piezoelectric device comprising the steps of attaching to, or integrally forming with, a first element of porous crystalline material, a second element, and attaching to said first element at least one electrode, such that subjecting said first element to an electric potential via said at least one electrode results in a strain induced by said first element on said second element.

18. The method claim 17, wherein said porous crystalline material is selected from the group consisting of porous silicon, or other material with conductive channels and isolating channels such as spaces.

19. The method of claim 17, wherein said second element is made of crystal material.

20. A method of producing a piezooptic device comprising the steps of attaching to, or integrally forming with, a first element of porous crystalline material, a second element, and providing at least one light source, such that subjecting said first element to light originating from said at least one light source results in a strain induced by said first element on said second element.

21. The method claim 20, wherein said porous crystalline material is selected from the group consisting of porous silicon, or other material with conductive channels and isolating channels such as spaces.

22. The method of claim 20, wherein said second element is made of crystal material.

23. A method of straining a porous crystalline material element, the method comprising the step of subjecting the porous crystalline material element to electric potential.

24. A method of straining a porous crystalline material element, the method comprising the step of preventing the subjection the porous crystalline material element to .

25. A method of relaxing a porous crystalline material element which is subjected to an electric potential, the method comprising the step of preventing the electric potential from the porous crystalline material element.

26. A method of relaxing a porous crystalline material element which is subjected to light, the method comprising the step of preventing the light from the porous crystalline material element.

27. A piezoelectric device comprising an element of porous crystalline material and at least one electrode being in electrical contact

with said element, such that subjecting said element to an electric potential via said at least one electrode results in a strain developing in said element.

28. A piezooptic device comprising an element of porous crystalline material and at least one light source being in lighting distance therefrom, such that subjecting said element to light via said light source results in a strain developing in said element.

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